

Remarks

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and following remarks. Claims 1-43 remain pending in the current application. Claims 2-6, 8, 16-21, 23, 31, 33, 37, 38, and 42 have been allowed. Claims 25, 32, and 36 are indicated as being objected to in the Office Action Summary, but there is no mention of claims 25, 32, or 36 in the Detailed Action. Applicants therefore assume that there are no additional objections to these claims beyond the stated objections to claims from which they depend. Claims 1, 7, 9, 11-15, 22-24, 26-30, 34, 41, and 43 have been objected to. Claims 9-11, 35, 39, and 40 have been rejected under 35 U.S.C. § 112. Claims 1, 7, 9, 10, 12-15, 22, 24, 25, 27-30, 33-35, 39-41, and 43 have been amended.

Drawings

The Office Action states that Figures 1-13 should be designated by a legend such as "Prior Art," stating that only that which is old is illustrated. Applicants respectfully submit that the Figures 1-13 do not illustrate that which is old and should not be designated by a legend such as "Prior Art." Applicants respectfully request that the objection to the drawings be removed and that the drawings filed on May 17, 2001, be marked as accepted by the Examiner as they were in the Office Action mailed on May 9, 2003.

Claim Objections

The Office Action objects to claim 1, stating that "said condensed conversion matrix" lacks sufficient antecedent basis. Claim 1 has been amended to address this antecedent basis issue, and not for reasons related to patentability. Therefore, Applicants respectfully request that the objection to claim 1 be removed.

The Office Action objects to claims 7 and 22, stating that "individual signals" needs to be specified. Claims 7 and 22 have been amended to address this antecedent basis issue, and not for reasons related to patentability. Therefore, Applicants respectfully request that the objections to claims 7 and 22 be removed.

The Office Action objects to claims 9 and 24, stating that "the six categories of output state transitions" and "the plurality of sets of states" lack sufficient antecedent basis. Claims 9

and 24 have been amended to address the antecedent basis issues with respect to "six categories of output state transitions" and "sets," and not for reasons related to patentability. Applicants respectfully submit that there is sufficient antecedent basis for the phrase "the plurality of sets of states," however, because claims 9 and 24 depend from claims 8 and 23, respectively, which comprise the following act: "classifying each next state of the conversion matrix into one of a **plurality of sets of states** based on predefined criteria" (emphasis added). Therefore, Applicants respectfully request that the objections to claims 9 and 24 be removed.

The Office Action objects to claims 11 and 26, stating that "the edge sensitive HDL primitive" and "the level sensitive HDL primitive" lack sufficient antecedent basis. Applicants respectfully submit that there is sufficient antecedent basis, however, because claims 11 and 26 depend from claims 9 and 24, respectively, which depend from claims 8 and 23, respectively, which each comprise the following act: "selecting either **an edge sensitive HDL primitive** or a **level sensitive HDL primitive** for the generic HDL register based on selected ones of the plurality of sets of states" (emphasis added). Therefore, Applicants respectfully request that the objections to claims 11 and 26 be removed.

The Office Action objects to claim 12, stating that "the particular set of functions" and "the edge sensitive HDL primitive" lack sufficient antecedent basis. Applicants respectfully submit that there is sufficient antecedent basis, however, because claim 12 depends from claim 9, which depends from claim 8, which comprises the following acts: "selecting either **an edge sensitive HDL primitive** or a level sensitive HDL primitive for the generic HDL register based on selected ones of the plurality of sets of states" and "selecting **a particular set of functions** based on the generic HDL register selected, each function of the particular set of functions corresponding to an input to the generic HDL register" (emphasis added). Therefore, Applicants respectfully request that the objection to claim 12 be removed.

The Office Action objects to claims 12-15 and 27-30, stating that terms describing functions and sets should be identified as such and that "do not cares" should be clarified as being values. Claims 12-15 and 27-30 have been amended to address these grammatical issues, and not for reasons related to patentability. Therefore, Applicants respectfully request that the objections to claims 12-15 and 27-30 be removed.

The Office Action objects to claim 23, stating that "the specific format" lacks sufficient antecedent basis. Applicants respectfully submit that there is sufficient antecedent basis,

however, because the preamble of claim 23 recites: "A machine readable medium having stored thereon machine executable instructions to implement a method for converting a data structure from a **specific format** in a hardware description language (HDL) to generic HDL elements" (emphasis added). Therefore, Applicants respectfully request that the objection to claim 23 be removed.

The Office Action objects to claim 34, stating that it is unclear whether "a column" is the conversion matrix column or some other column. Claims 33 and 34 have been amended to address this antecedent basis issue (e.g., "a column" has been changed to "the conversion matrix column" in claim 34; and "wherein the conversion matrix comprises conversion matrix columns" has been added to claim 33), and not for reasons related to patentability. Therefore, Applicants respectfully request that the objection to claim 34 be removed.

The Office Action objects to claim 41, stating that "primitives" is misspelled. Claim 41 has been amended to correct this typographical error, and not for reasons related to patentability. Therefore, Applicants respectfully request that the objection to claim 41 be removed.

The Office Action objects to claim 43, stating that "the plurality of entries" lacks sufficient antecedent basis. Claim 43 has been amended to correct a typographical error (e.g., claim 43 now properly depends from claim 42 instead of claim 16), and not for reasons related to patentability. With the entry of the amendment, there is now sufficient antecedent basis for "the plurality of entries." Therefore, Applicants respectfully request that the objection to claim 43 be removed.

Claim Rejections under 35 U.S.C. § 112

The Office Action rejects claim 9 under 35 U.S.C. § 112, second paragraph, as being incomplete and indefinite. The Office Action states that structural cooperative relationships between "output state transitions" and the remaining claim 9 elements have been omitted. Claim 9 has been amended to specify that "output state transitions" are "output state transitions of the circuit element." The Office Action also states that the limitations do not reflect the specification from page 15, line 13, to page 16, line 14. Applicants respectfully submit, however, that claim 9 does reflect the specification. One might first note that the example in the specification at page 11, lines 6-7, states that "[a] separate column [in the FIG. 4 illustration of an embodiment of a conversion matrix] is included for every possible next state of the UDP." The example found in

the specification at page 15, line 13, to page 16, line 14, discloses three criteria on which sets of columns are based: "the columns are classified as either edge (E) or level (L) columns," "the columns are classified as reachable or unreachable (UR)," and "the columns are classified into six output state transitions." These criteria are reflected in the language of claim 9, which recites in part: "each next state is classified into one of a plurality of sets of states according to level (L) or edge (E) sensitive states, according to reachable or unreachable (UR) states, and according to output state transitions of the circuit element, wherein the output state transitions comprise six categories of output state transitions." Furthermore, the specification, in connection with an example, also states that "columns are classified into 24 sets," including "six level sets that are reachable (L00, L01, L0X, L10, L11, L1X)," "six edge sets that are reachable (E00, E01, E0X, E10, E11, E1X)," "six level sets that are unreachable (LUR00, LUR01, LUR0X, LUR10, LUR11, LUR1X)," and "six edge sets that are unreachable (EUR00, EUR01, EUR 0X, EUR10, EUR11, EUR1X)." Claim 9 recites in part: "such that the plurality of sets of states comprises 24 sets of states, wherein the 24 sets of states comprise sets included within the following parentheses (L00, L01, L0X, L10, L11, L1X, E00, E01, E0X, E10, E11, E1X, LUR00, LUR01, LUR0X, LUR10, LUR11, LUR1X, EUR00, EUR01, EUR 0X, EUR10, EUR11, EUR1X)." Therefore, Applicants respectfully request that the rejection to claim 9 be withdrawn.

The Office Action rejects claim 10 under 35 U.S.C. § 112, second paragraph, as being incomplete, and states that structural cooperative relationships between "individual value states" and the remaining claim 10 elements have been omitted. Claims 10 and 25 have been amended to clarify that the phrase "individual value states" corresponds to "each of the N current input values, each of the N next input values, the current output value Q, and the next output value Q+." Therefore, Applicants respectfully request that the rejection to claim 10 be withdrawn.

The Office Action rejects claim 11 under 35 U.S.C. § 112, second paragraph, as being incomplete, and states that it is unclear what is meant by E01 and E10 sets being empty. Applicants respectfully direct attention to the specification at page 18, lines 15-19, which discuss an exemplary scenario in which sets E01 and E10 are empty. Therefore, Applicants respectfully request that the rejection to claim 11 be withdrawn.

The Office Action rejects claims 35, 39, and 40 under 35 U.S.C. § 112, second paragraph, as being incomplete, and states that structural cooperative relationships between "output state transitions" and the remaining claim elements have been omitted. Claims 35, 39, and 40 have

been amended to specify that "output state transitions" are "output state transitions of the circuit element." Therefore, Applicants respectfully request that the rejections to claims 35, 39, and 40 be withdrawn.

Request for Interview

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office Action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

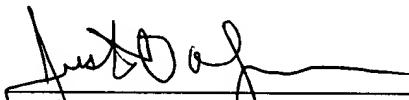
This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

Conclusion

The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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